

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

What is claimed is:

1. (Currently Amended) A buffer formulation for calibrating pH electrodes comprising consisting essentially of:
 - (a) a bactericide ~~consisting essentially of~~ benzethonium chloride; and
 - (b) a buffering agent selected from the group consisting of sodium phosphate, potassium phosphate, potassium acid phthalate, sodium carbonate, sodium bicarbonate, 2-[N-cyclohexylamino]ethanesulfonic acid, N-[2-hydroxyethyl]piperazine-N'-[2-ethanesulfonic acid], and mixtures thereof;
 - (c) sodium chloride; and
 - (d) water,

as a solution that exhibits a decrease in pH of about 0.1 units or less and no perceptible precipitate when subjected to 15-35 kGy gamma irradiation.
2. (Previously presented) The formulation of claim 1, wherein the concentration of benzethonium chloride in the formulation is greater than 0 % but less than 0.01 % (by weight).

3. (Previously presented) The formulation of claim 1, wherein the concentration of benzethonium chloride in the formulation is about 0.003% (by weight).
4. (Previously presented) The formulation of claim 1, wherein the concentration of buffering agent in the formulation is at least about 50 mM.
5. (Previously presented) The formulation of claim 1, wherein the concentration of buffering agent in the formulation is about 100 mM.
6. (Previously presented) The formulation of claim 1, wherein the concentration of benzethonium chloride in the formulation is about 0.003% (by weight) and the concentration of the buffering agent in the formulation is about 100 mM.
7. (Currently amended) A buffer formulation for calibrating pH electrodes comprising consisting essentially of a solution of:
 - (a) a bactericide consisting essentially of about 0.003% (by weight) benzethonium chloride;
 - (b) a buffering agent selected from the group consisting of sodium phosphate dibasic anhydrous, potassium dihydrogenphosphate, and combinations thereof;
 - (c) sodium chloride; and
 - (d) water.

8. (Currently amended) A buffer formulation for calibrating pH electrodes comprising consisting of:
 - (a) about 1 to about 15 g. potassium dihydrogen phosphate;
 - (b) about 1 to about 15 g. sodium phosphate dibasic anhydrous;
 - (c) about 2 to about 5 g. sodium chloride;
 - (d) about 800 to about 1100 g. water; and
 - (e) about 0.005% to about 0.001% (by weight) benzethonium chloride.
9. (Previously presented) A method for formulating a sterile, storage stable buffer for calibrating pH electrodes comprising:
 - (a) preparing a liquid mixture comprising benzethonium chloride and a buffering agent selected from the group consisting of: sodium phosphate, potassium phosphate, potassium acid phthalate, sodium carbonate, sodium bicarbonate, 2-[N-cyclohexylamino]ethanesulfonic acid, and N-[2-hydroxyethyl]piperazine-N'-[2-ethanesulfonic acid]; and
 - (b) subjecting the mixture to sterilization by gamma irradiation.
10. (Previously presented) The method of claim 9, wherein the sterilization step consists of subjecting the buffer mixture to 15-35 kGy of gamma irradiation.

11. (Previously presented) The method of claim 9, wherein the buffering agent is added to the mixture to a concentration of about 50 mM to about 200 mM.
12. (Previously presented) The method of claim 9, wherein the buffering agent is added to the mixture to a concentration of about 50 mM to about 100 mM.
13. (Previously presented) The method of claim 9, wherein the benzethonium chloride is added to the mixture to a concentration of about 0.001% to about 0.01% (by weight).
14. (Previously presented) The method of claim 9, wherein the gamma irradiation effects a change in pH of the buffer mixture of no more than about 0.05 pH units.
15. (Previously presented) A method of calibrating pH electrodes comprising
 - (a) formulating a buffer solution of known pH consisting essentially of KH₂PO₄, Na₂HPO₄, NaCl, water, and benzethonium chloride;
 - (b) irradiating the buffer solution with about 15-35 kGy of gamma radiation;
 - (c) exposing pH electrodes to be calibrated to the buffer solution;
 - (d) detecting the pH as measured by the pH electrodes; and
 - (e) comparing the pH detected in step (d) with the known pH of the buffer solution.

16. (New) The buffer formulation of claim 1, wherein the gamma irradiation produces a decrease in pH of 0.03 units or less.
17. (New) A buffer formulation consisting essentially of:
 - (a) benzethonium chloride;
 - (b) a buffering agent selected from the group consisting of sodium phosphate, potassium phosphate, potassium acid phthalate, sodium carbonate, sodium bicarbonate, 2-[N-cyclohexylamino]ethanesulfonic acid, N-[2-hydroxyethyl]piperazine-N'-[2-ethanesulfonic acid], and mixtures thereof;
 - (c) sodium chloride; and
 - (d) water,as a solution that prevents microorganism growth for at least about 8 weeks after being formulated and, when subjected to about 15-35 kGy gamma irradiation exhibits a decrease in pH of about 0.1 pH units or less.
18. (New) The formulation of claim 17, wherein the concentration of benzethonium chloride in the formulation is greater than 0% but less than 0.01% (by weight).
19. (New) The formulation of claim 17, wherein the concentration of buffering agent in the formulation is about 100 mM.

20. (New) The formulation of claim 17, wherein the concentration of benzethonium chloride in the formulation is about 0.003% (by weight) and the concentration of the buffering agent in the formulation is about 100 mM.